CLAIMS

- A system of parsing unstructured or partially structured data; *said system processing at least portions of said data in an incremental manner.
- 5 2. The system of Claim 1 wherein said processing in an incremental manner comprises multiple parsing steps, each parsing step performed by consulting an inference engine.
- 3. A knowledge base for use in association with the system

 of Claim 1 or Claim 2, said knowledge base analyzing

 said data at one or more predefined levels of analysis.
 - 4. The knowledge base of Claim 3 wherein said levels include a level of analysis at a lexico-grammatical level.
- 15 5. The knowledge base of Claim 3 wherein said levels include a level of analysis at an orthographic level.
 - 6. The knowledge base of Claim 3 wherein said levels include a level of analysis at a semantic level.
- 7. The knowledge base of Claim 3 wherein said levels
 20 include a level of analysis at a contextual level.

- 8. The knowledge base of Claim 3 wherein said knowledge base uses a knowledge representation language which embodies linguistic theory.
- 9. The knowledge base of Claim 8 wherein said linguistic theory is that of systematic functional linguistics.
 - 10. The knowledge base of Claims 8 or 9 wherein said linguistic theory enables the complete representation of all possible forms of said data.
- 11. The knowledge base of Claim 10 wherein said data is

 attribute data.
 - 12. The knowledge base of Claim 11 wherein said attribute data is name and address data.
- 13. A method of parsing an attribute data set; said method comprising incrementally refining elements of said data set until a predefined level of meaning is determined.
 - 14. The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an elaboration operator.
- 15. The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an encapsulation operator.

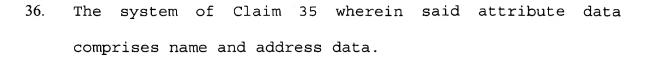
- 16. The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an enhancement operator.
- 17. The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an entailment operator.
 - 18. The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an extension operator.
- 10 19. The method of any one of Claims 13 through to 18 wherein a best-first searching algorithm is utilized.
 - 20. The method of any one of Claims 13 to 18 wherein a look-ahead algorithm is utilized.
- 21. The system of any one of Claims 1 to 18 wherein an inference strategy is utilized.
 - 22. A system for processing an unstructured or partially structured set of data so as to obtain a set of structured data; said system comprising a parser engine in communication with a knowledge database.

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- 23. The system of Claim 22 wherein said parser engine is reliant on data in the form of knowledge retained in said knowledge database.
- 24. The system of Claim 22 or Claim 23 further including a temporary data store associated with said parser engine.
 - 25. The system of Claim 24 further including a data block identifier which provides input to said parser engine.
- 26. The system of Claim 25 wherein said data block identifier breaks said set of unstructured data into a 10 plurality of data blocks for input to said parser engine.
 - 27. The system of Claim 26 wherein said parser receives consecutive ones of said data blocks and performs a first association step on said data blocks based on knowledge derived from said knowledge database so as to derive a first postulated categorization of said data blocks and storing said data blocks thereby categorized in said temporary storage means.
- 28. The system of Claim 27 wherein said parser engine
 20 performs a confirmation step on said data blocks stored
 in said temporary storage means so as to either confirm
 or reject its categorization of said data blocks.

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- 29. The system of any one of Claims 22 through to 28 wherein said knowledge base includes knowledge about the information structures of identifying attribute objects.
- 30. The system of any one of Claims 22 through to 29 wherein said knowledge database includes knowledge about an association between patterns and the identifying attribute objects they represent.
- 31. The system of any one of Claims 22 through to 30 wherein a precedence of alternative solutions has been precompiled in said knowledge database thereby to allow best-first searching to be performed by said parser engine.
 - 32. The system of any one of Claims 22 through to 31 wherein said parser engine utilizes a best-first searching algorithm.
 - 33. The system of any one of Claims 22 to 32 wherein said parser engine utilizes a look-ahead algorithm.
 - 34. The system of any one of Claims 22 to 33 wherein said parser engine utilizes an inference strategy.
- 20 35. The system of Claim 1 or Claim 2 or any one of Claims 22 to 34 wherein said data comprises attribute data.



37. NEW GERENDS ON 22 38. NEW 9 9 37